

References

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Glossary

Advanced Messaging

Advanced Messaging services include such services as subscriber defined on-demand roaming, forwarding and redirection, two-way and acknowledged voice paging, and wireless packet data services.

CALEA

CALEA is the acronym for Communications Assistance for Law Enforcement Act.

call completion

As interpreted by this Standard for advanced messaging, call completion is interpreted as follows: delivery of the tone-only, numeric, alphanumeric, binary data, and/or voice messages to the RF network or to the appropriate External Messaging source or Input Node when termination is applicable and the alternate address is an external wireline address in advanced one-way, two-way, acknowledged voice, and wireless packet data outbound message services, and arrival, at the Home Node, of the tone-only, numeric, alphanumeric, binary data, and/or voice messages transmitted from a subject's radio transceiving device in advanced two-way, acknowledged voice, and wireless packet data inbound message services. Any transmissions attempted by a subjects' radio transceiving device which do not arrive at the Home Node are not considered to be "completed".

call content

see *content*.

call-identifying information

Call-identifying information is defined in CALEA Section 102 (2) to be "dialing or signaling information that identifies the origin, direction, destination, or termination of each communication generated or received by a subscriber by means of any equipment, facility, or service of a [PSP]." As interpreted for advanced one-way, two-way, acknowledged voice, and wireless packet data outbound message services by this Standard for advanced messaging: *destination* is the radio receiving or transceiving device address to which a call is being made (e.g., called party); *direction* is the outbound transmission path from the PSP Home Node to the RF network or to the appropriate External Messaging source or Input Node when termination is applicable and the alternate address is an external wireline address; origin is the number or address of the party initiating the call (e.g., calling party); and *termination* is the alternate address to which a call is being routed, if applicable (e.g., forwarded party). As interpreted for advanced two-way, acknowledged voice, and wireless packet data inbound message services by this Standard for advanced messaging: *destination* is the number or address of the device to which the intercept subject sends a message (i.e., called party), *direction* is the transmission path from the intercept subject's radio transceiving device to the intercept subject's PSP Home Node, *origin* is the address of the intercept subject's radio transceiving device sending the message (i.e., the calling party), and *termination* is the same as *Destination*. For these outbound message services, reasonably available call-identifying information is that information used in the Home Node for call processing. Reasonably available call-identifying information generally consists of the address of the subject's radio receiving or transceiving device(s) and, if appropriate, the address to which the message has been forwarded or redirected. The call origin is not reasonably available in most PSP installations but may be obtained through the originating service provider (e.g., EC, ISP). For these inbound message services, both *Origin* and *Destination* information are available.

calling party

The calling party is the originating party of an advanced messaging message regardless of destination.

capcode

Capcode is the radio address decoder element in each radio device that permits the radio device to be selectively identified and signaled over a common radio channel. Colloquially, this term is used to generically identify the radio device's radio signaling scheme address in this Specification for advanced messaging even though different radio signaling scheme technologies may use similar but different names for the same function.

channel

Channel is an independent path for communicating between two points.

clone radio receiving device

A clone radio receiving device is a radio receiving device, provided by the LEA, that is pre-programmed by the PSP as authorized by a lawful authorization with the intercept subject's radio receiving address and set to monitor the subject's radio receiving frequency with the express purpose of decoding and capturing the subject's call content when used within the subject's fixed geographical broadcast area. A clone radio receiving device has the same characteristics and call content reception and processing features as the intercept subject's radio receiving device.

Commission

Commission is defined in CALEA Section 102 (3) to be "the Federal Communications Commission".

communication

Communication, in this Standard, refers to any wire or electronic communication, as defined in 18 USC 2510.

communication intercept

see *intercept*.

compression

Compression is a method or methods for reducing the bandwidth or number of bits needed to encode information or encode a signal. Algorithms used may be 'lossless' which allows recovery of all information content or 'lossy' which does not allow recovery of all information content.

connection

Connection is a relationship between two or more parties of a call to allow communication between them.

content

Content is defined in 18 USC 2510 (8) to be "when used with respect to any wire or electronic communications, includes any information concerning the substance, purport, or meaning of that communication." As interpreted by this Standard for advanced messaging, call content covers tone-only, numeric, alphanumeric, binary data, and voice messages delivered to the PSP RF Network or to the appropriate External Messaging source or Input Node when termination is applicable and the alternate address is an external wireline address from the subscriber's Home Node in the PSP Infrastructure in advanced one-way, two-way, acknowledged voice, and wireless packet data outbound message services, or transmitted from a subscriber's radio transceiving device and delivered to the subscriber's Home Node in the PSP Infrastructure in advanced two-way, acknowledged voice, and wireless packet data inbound message services.

coverage area

Coverage area is the geographic region throughout which radio receiving and/or transceiving devices can be expected to reliably send communication to and/or receive communication from the PSP Infrastructure.

Data Delivery Point for LEA(s)

The Data Delivery Point for LEA(s) is the PSP-maintained AMI protocol interface between the PSP Infrastructure and the LEA-provided transport function to the LEA-provided CALEA Interface.

Delivery Action

For advanced messaging, the Delivery Action is responsible for delivering intercepted communications expeditiously from the PSP Infrastructure Data Delivery Point for LEA(s) for use by one or more LEA-Provided CALEA Interfaces (up to a total of five per intercept subject) using the Advanced Messaging Interface (AMI) Protocol.

destination

see call-identifying information

Destination.vcf

Destination.vcf is a vCard-formatted file containing identification information pertaining to the destination of a message.

direction

see call-identifying information

EC

see Exchange Carrier.

electronic surveillance

Electronic surveillance is the statutory-based legal authorization, process, and associated technical capabilities and activities of LEAs related to the interception of wire, oral, or electronic communications while in transmission.

encoding

Encoding is the process of converting data or voice signals into a format suitable for transmission.

encryption

Encryption is the process of changing the format of the information content of a message or message routing information such that external observers will not be able to interpret correctly the content or routing information.

Exchange Carrier

Exchange Carrier is the wireline PSTN carrier interface provider. Exchange carriers may take the form of a local exchange carrier or an interexchange carrier.

External Messaging Function

External Messaging Function is the delivery of messages to and from wireline carrier sources (e.g., EC, ISP) to the PSP Infrastructure.

functional entity

Functional entity is a system or subsystem capable of providing a defined service.

government

Government is defined in CALEA Section 102 (5) to be "the government of the United States and any agency or instrumentality thereof, the District of Columbia, any commonwealth, territory, or possession of the United States, and any State or political subdivision thereof authorized by law to conduct electronic surveillance."

Home Node

Home Node is the PSP Infrastructure network node that encompasses subscriber database records and those functions needed to route messages between the appropriate Input Node(s) and the RF Network.

HTTP

HyperText Transfer Protocol is a set of protocols used to transfer information on the WWW.

IETF

Internet Engineering Task Force is the technical body responsible for developing and maintaining protocols related to the Internet.

IMC

Internet Mail Consortium (<http://www.imc.org/>) is the standards development organization responsible for developing and maintaining many mail and identification formats and protocols (e.g., vCard®).

inbound message

Inbound messages are transmitted by the radio transceiving device to the radio transceiving device's Home Node within the PSP network. These messages may be destined for external wireline addresses, other wireless devices, or the PSP system.

Information Service

Information Service is defined in CALEA Section 102 (6) to be "(A) the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunication; and (B) includes – (i) a service that permits a customer to retrieve stored information from, or file information for storage in, information storage facilities; (ii) electronic publishing; and (iii) electronic messaging services; but (C) does not include any capability for a [PSP's] internal management, control, or operation of its telecommunication network."

Input Node

Input Node is the PSP Infrastructure network node that encompasses those functions needed to deliver messages to and from wireline carrier sources (e.g., EC, ISP).

intercept

Intercept is defined in 18 USC 2510 (4) to be "the aural or other acquisition of the content of any wire, electronic, or oral communication through the use of any electronic, mechanical, or other device."

intercept subject

Intercept subject is a paging or wireless packet data service subscriber whose reasonably available call-identifying information and call content have been authorized by a court to be intercepted and delivered to an LEA.

Internet Service Provider

Internet Service Provider is the wireline Internet carrier interface provider.

IrDA®

InfraRed Data Association (<http://www.irda.org/>) is the standards development organization responsible for developing and maintaining many infrared-based communications protocols and for extending the IMC's identification formats and protocols (e.g., vCard®) to cover RF technologies.

ISP

see *Internet Service Provider*.

LAES

LAES is an initialism for Lawfully Authorized Electronic Surveillance.

Law Enforcement Administrative Function

Law Enforcement Administrative Function is responsible for controlling LEA electronic surveillance functions, for providing the LEA-Provided CALEA Interface and the associated Delivery Function link to the PSP Infrastructure for receiving the messaging traffic of the subject of a lawful authorization, and for capturing and processing of the delivered call content and reasonably available call-identifying information. The Law Enforcement Administrative Function is the responsibility of the LEA. Other functions of the Law Enforcement Administrative Function are beyond the scope of this standard.

Law Enforcement Agency

Law Enforcement Agency is a government entity with the legal authority to conduct electronic surveillance.

Lawful Authorization

Lawful Authorization is the legal entity required to authorize a CALEA intercept. No intercepts shall take place without specific lawful authorization. One Lawful Authorization may encompass multiple devices and/or multiple geographic locations.

Lawful Authorization Action

Lawful Authorization Action is the serving of the Lawful Authorization to the PSP by the LEA.

LEA

see *Law Enforcement Agency*.

MIME

MIME is an acronym for Multipurpose Internet Mail Extensions which is a set of specifications designed to extend the usefulness of Internet mail.

Origin

see *call-identifying information*.

Origin.vcf

Origin.vcf is a vCard-formatted file containing identification information pertaining to the origin of a message.

outbound messages

Outbound messages are transmitted to the radio transceiving device from the radio transceiving device's Home Node within the PSP Infrastructure. These messages may originate from external wireline sources, other wireless devices, or the PSP Infrastructure.

Output Node

Output Node is that portion of the PSP Infrastructure RF Network node that encompasses those functions needed to encode and deliver messages to and from wireless carrier sources (e.g., radio transceiving devices) using RF transmitters and, in two-way advanced messaging systems, RF receivers.

Paging or Wireless Packet Data Service Provider⁹

Paging or Wireless Packet Data Service Provider is defined from CALEA Section 102 (8) to be, "a person or entity engaged in the transmission or switching of wire or electronic communications as a common carrier for hire, and includes 1) a person or entity engaged in providing commercial mobile service, or 2) a person or entity engaged in providing wire or electronic communications switching or transmission service to the extent that the Commission finds such service is a replacement for a substantial portion of local telephone exchange service and that it is in the public interest to deem such a person or entity to be a [PSP] for purposes of this title. This does not include 1) persons or entities insofar as they are engaged in providing information services, and 2) any class or category of [PSPs] that the Commission exempts by rule after consultation with the U. S. Attorney General."

⁹ This Standard uses the term *paging or wireless packet data service provider* instead of the CALEA term *telecommunication carrier*.

Provision Action

Provision Action is responsible for enabling and disabling activation of the interface to the LEA-Provided CALEA Interface Function as required to receive the reasonably available call-identifying information and call content described in the Lawful Authorization. For advanced messaging, the Provision Action includes the ability to unobtrusively make the call content and reasonably available call-identifying information available to the delivery action and to protect (i.e., prevent unauthorized access, manipulation, and disclosure) intercept controls and intercepted call content and reasonably available call-identifying information consistent with PSP security policies and practices. The Provision Action establishes the interface and controls between the LEA and the PSP for the purpose of intercepting messaging traffic as specified by a Lawful Authorization.

PSDN

PSDN is an initialism for Public Switched Data Network.

PSP

see Paging or Wireless Packet Data Service Provider.

PSP Administration Function

PSP Administration Function is responsible for controlling the Provision, enabling the Delivery Actions, and maintaining the Data Delivery Point for LEA(s). Other functions of the PSP Administrative Function are beyond the scope of this standard.

PSP Infrastructure

PSP Infrastructure embodies the Home Node central control switch(es), RF Network of Output Node(s), RF transmitter(s), and RF receiver(s), and Input Node wireline interconnect(s) that tie the radio network to the PSTN, PSDN, the World Wide Web, and other land-based facilities to allow advanced messaging calls to be initiated and transmitted to or transmitted from the intended subscriber.

PSP Infrastructure Function

PSP Infrastructure Function is the switching and radio transmission network of the PSP. For this Standard, the PSP Infrastructure is responsible for the collection and delivery of call content and reasonably available call-identifying information of one or more lawfully authorized intercept subject(s).

PSTN

PSTN is an initialism for Public Switched Telephone Network.

RF

RF is an initialism for Radio Frequency.

RF Network

RF Network is the PSP Infrastructure network node that encompasses those functions needed to deliver messages to and from wireless carrier sources (e.g., radio transceiving devices). The RF Network includes RF transmitters and Output Node encoders and, in two-way advanced messaging systems, RF receivers.

RF receiver

RF receiver is a component in the PSP Infrastructure's RF Network which receives and translates radio-based communications from the subject radio device to wireline-based communications.

RF transmitter

RF transmitter is a component in the PSP Infrastructure's RF Network which receives and translates wireline-based communications to radio-based communications and transmits the radio-based communications to the subject radio device.

RFC

RFC is an initialism for Request For Comment and represents the protocol specifications produced by the IETF.

signaling scheme

Signaling scheme is the radio signaling protocol used to deliver messages to specific radio receiving devices. Radio signals radiated by base station transmitters are encoded with radio receiving device capcode and message content information. These signaling schemes may utilize analog (e.g., 2-tone, 5/6-tone) or digital (e.g., POCSAG, Golay Sequential Code®, FLEX™, ERMES, ReFLEX™, InFLEXion™, DataTAC™) modulating techniques with the transmitted information organized in accordance with any of several formats which specify such parameters as transmission rate, structure of the information, and error control mechanisms.

SMTP

SMTP is an initialism for Simple Mail Transport Protocol and represents the protocol specifications produced by the IETF for simple internet email.

Subject Radio Device Function

Subject Radio Device Function is responsible for collecting and interpreting and, where applicable, encoding and disbursing communications for the intercept subject.

subscriber

Subscriber is the entity subscribing to the services provided by the PSP.

Termination.vcf

Termination.vcf is a vCard-formatted file containing identification information pertaining to the termination of a message.

traditional paging

Traditional paging supports the one-way wireless transmission of tone-only, numeric, alphanumeric, and voice messages from a PSP to one or more radio receiving devices within a stipulated, predefined geographic radio coverage area of the PSP Infrastructure.

termination

see *Call-Identifying Information*.

transmission

Transmission is the act of transferring communications from one location or another by wire, radio, electromagnetic, photoelectronic, or photo-optical system.

unobtrusive

Unobtrusive in this context is not undesirably noticeable or blatant; inconspicuous; within normal call variances.

USC

USC is an initialism for United States Code.

vCard®

vCard® is an IMC-defined file format containing identification information.

wire communications

Wire communications is defined in 18, USC 2510 (1) to be "any aural transfer made in whole or in part through the use of facilities for the transmission of communications by the aid of wire, cable, or other like connection between the point of origin and the point of reception (including the use of such connection in a switching station) furnished or operated by any person engaged in providing or operating such facilities for the transmission of interstate or foreign communications or communications affecting interstate or foreign commerce and such term includes any electronic storage of such communication."

wireless

Wireless, in this Standard, refers to traditional paging and advanced messaging services.

wireline

Wireline, in this Standard, refers to traditional wire-based telephone and packet data services.

World Wide Web

World Wide Web is an application running on an ad hoc global network that has been defined to provide communications between a wide range of people, places, and things.

WWW

see World Wide Web.

Annex 1 Examples

The following annex is informative only and is not a part of this standard.

Several basic messaging scenarios are described in this annex. The intent of the annex is to provide representative examples of how such communications *might* be intercepted and the appropriate information conveyed to the LEA under this standard. This annex is not intended as an exhaustive set of examples. The scenarios contained in this annex are informative only. PSPs may provide access using configurations and accesses not shown. PSPs are not obligated to implement particular services or features in the way illustrated in these exemplary scenarios.

For the purposes of illustrating the following examples, the PSP referenced will be known as "USA Wireless Messaging" with a home node in "Slippery Rock, SD". The LEA will be known as "LEA1" and the Lawful Authorization identification number will be "PI314159265".

A1. Message Examples Sent To Radio Receiving Devices

The following examples are provided to illustrate typical messaging sent to radio receiving devices.

A1.1 Intercept Subject using Traditional Paging's Predefined Geographical Coverage

This is a simple paging example using techniques covered by Standard 1 - CALEA Specification for Traditional Paging.

A1.1.1 Transaction Flow:

- LEA (LEA1) presents a Lawful Authorization for a capcode or PIN intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has traditional paging features and programs the LEA-provided clone radio receiving device with the intercept subject's capcode.
- PSP receives a message for the intercept subject.
- PSP sends the message to the PSP's RF infrastructure.
- The RF infrastructure broadcasts the message in the intercept subject's predefined geographical coverage area.
- Both the subject and the clone radio receiving device receive the call content of the message at the same time.

A1.1.2 AMI-Delivered Information

Since this is an example of a traditional paging application, there is no AMI Data Transfer.

A1.2 Intercept Subject Using Advanced Messaging's Subscriber Defined On-Demand Roaming

This example illustrates the transaction flow and AMI-delivered information for a message sent to an intercept subject who has redefined the available coverage area in which messages shall be sent.

A1.2.1 Transaction Flow:

- LEA (LEA1) presents a Lawful Authorization for a capcode intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP does not receive *origin* call-identifying information.
- PSP receives a message for the intercept subject.
- PSP sends the message as call content to the PSP Infrastructure's RF Network.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.
- PSP RF Network broadcasts the message in the intercept subject's current geographical coverage area.

A1.2.2 AMI-Delivered Information

The following data transfer is sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer - Outbound Message from the PSP to the Radio Transceiving Device:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 225
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:John Q. Public
X-PCIA-CAPCODE:987654321
END:VCARD
(mandatory blank line)
--content
Content-Type: text/plain; charset=us-ascii
(mandatory blank line)
[actual text content]
```

(mandatory blank line)

--content--

A1.3 Intercept Subject Forwards to Alternate Radio Receiving Device

This example illustrates the transaction flow and AMI-delivered information for a message sent to an intercept subject who has defined an alternate destination to which messages shall be sent.

A1.3.1 Transaction Flow:

- LEA (LEA1) presents a Lawful Authorization for a capcode intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP does not receive *origin* call-identifying information.
- Intercept subject has implemented forwarding to an alternate radio receiving device PIN.
- PSP receives a message for the intercept subject and forwards to alternate radio receiving device PIN.
- PSP sends the message as call content to the PSP Infrastructure's RF Network for delivery to the alternate radio receiving device.
- PSP sends an AMI protocol message with this call content and alternate address from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.

A1.3.2 AMI-Delivered Information

The following data transfer is sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer - Outbound Message from the PSP to the Radio Transceiving Device:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 225
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:John Q. Public
X-PCIA-CAPCODE:987654556
END:VCARD
(mandatory blank line)
--content
```

Content-Type: text/x-vcard; charset=us-ascii; name="termination.vcf"

(mandatory blank line)

BEGIN:VCARD

VERSION:2.1

N: not available

TEL;PAGER:5553535

END:VCARD

(mandatory blank line)

--content

Content-Type: text/plain; charset=us-ascii

(mandatory blank line)

[actual text content]*(mandatory blank line)*

--content--

A2. Message Examples Sent To and From Radio Transceiving Devices

The following examples are provided to illustrate typical messaging sent to and from advanced messaging radio transceiving devices.

A2.1 Intercept Subject in Good Coverage Area

This example illustrates the transaction flow and AMI-delivered information for a message sent to an intercept subject in a good coverage area.

A2.1.1 Transaction Flow:

- LEA (LEA1) presents a Lawful Authorization for a PIN intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP receives *origin* call-identifying information.
- PSP receives a message for the intercept subject.
- PSP sends the message as call content to the PSP Infrastructure's RF Network.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.
- PSP RF Network broadcasts the message in the intercept subject's last known geographical coverage area.
- PSP RF Network receives acknowledgment message from the intercept subject's radio transceiving device.
- PSP RF Network sends the acknowledgment message to the PSP Home Node of the intercept subject.
- PSP sends an AMI protocol message with this acknowledgment message call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.

A2.1.2 AMI-Delivered Information

The following two data transfers are sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer #1 - Outbound Message from the PSP to the Radio Transceiving Device:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 353
(mandatory blank line)
--content
```

Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:;not available
TEL:5055551212
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:John Q. Public
TEL;PAGER:1234567
UID:733456
END:VCARD
(mandatory blank line)
--content
Content-Type: text/plain; charset=us-ascii
(mandatory blank line)
[actual text content]
(mandatory blank line)
--content--

AMI Data Transfer #2 - Inbound Acknowledgment from the Radio Transceiving Device to the PSP:

POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:56 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 345
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:John Q. Public
TEL;PAGER:1234567
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)


```
BEGIN:VCARD
VERSION:2.1
N:System
UID:733456
END:VCARD
(mandatory blank line)
--content
Content-Type: text/plain; charset=us-ascii
(mandatory blank line)
[actual text content]
(mandatory blank line)
--content--
```

A2.2 Intercept Subject Out of Coverage Area when Message is Received by PSP

This example illustrates the transaction flow and AMI-delivered information for a message sent to an intercept subject when the intercept subject is out of the coverage area.

A2.2.1 Transaction Flow:

- LEA (LEA1) presents a Lawful Authorization for a capcode intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP receives *origin* call-identifying information.
- PSP receives a message for the intercept subject.
- PSP sends the message as call content to the PSP Infrastructure's RF Network.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.
- PSP RF Network broadcasts the message in the intercept subject's last known geographical coverage area.
- PSP RF Network does not receive acknowledgment message from the intercept subject's radio transceiving device. It is unknown to the PSP whether or not the intercept subject has received the message.

A2.2.2 AMI-Delivered Information

The following data transfer is sent via the AMI protocol to the LEA-Provided CALEA Interface.

AMI Data Transfer - Outbound Message from the PSP to the Radio Transceiving Device:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
```

Content-Length: 353
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N: not available
TEL:5055551212
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:John Q. Public
X-PCIA-CAPCODE:987654321
UID:733498
END:VCARD
(mandatory blank line)
--content
Content-Type: text/plain; charset=us-ascii
(mandatory blank line)
[actual text content]
(mandatory blank line)
--content--

PSP queues the unacknowledged message to be resent as shown in the previous examples. When the message is resent, a new AMI data transfer will accompany it using the same UID.

A2.3 Intercept Subject's Radio Transceiving Device Sends Message to Another Radio Transceiving Device

This example illustrates the transaction flow and AMI-delivered information for a message sent from an intercept subject to another person using radio techniques.

A2.3.1 Transaction Flow:

- LEA (LEA1) presents a Lawful Authorization for a PIN intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP receives a message from the intercept subject's radio transceiving device destined for another radio transceiving device within the same PSP.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.

A2.3.2 AMI-Delivered Information

The following data transfer is sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer - Inbound Message from the Radio Transceiving Device to the PSP:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 353
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:John Q. Public
TEL;PAGER:1234567
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:not available
TEL;PAGER:5273841
UID:731987
END:VCARD
(mandatory blank line)
--content
Content-Type: text/plain; charset=us-ascii
(mandatory blank line)
```

[actual text content]
 (mandatory blank line)
 --content--

Any *destination* user-generated replies sent via the PSP will be treated as new messages when the latter is not known to be a response to the former by the PSP due to the connectionless nature of these transactions.

A2.4 Intercept Subject's Radio Transceiving Device Sends Message to An External SMTP Email Address

This example illustrates the transaction flow and AMI-delivered information for a message sent from an intercept subject to a person with a wireline email address.

A2.4.1 Transaction Flow:

- LEA (LEA1) presents a Lawful Authorization for a PIN intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP infrastructure.
- PSP receives a message from the intercept subject's radio transceiving device destined for an external SMTP email address.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.

A2.4.2 AMI-Delivered Information

The following data transfer is sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer - Inbound Message from the Radio Transceiving Device to the PSP:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 353
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:John Q. Public
TEL;PAGER:1234567
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
```

(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:not available
EMAIL;INTERNET:any_name@any_domain.org
UID:731987
END:VCARD
(mandatory blank line)
--content
Content-Type: application/msword; name="spec.doc"
Content-Transfer-Encoding: Base64
(mandatory blank line)
[actual Base64-encoded MS Word file content]
(mandatory blank line)
--content--

Any *destination* user-generated replies sent via the PSP will be treated as new messages due to the connectionless nature of these transactions.

